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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/674,780

**Applicant(s)**

NORTHCUTT ET AL.

**Examiner**

Charles Chow

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 5/5/09.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10, 22-30 and 41-57 is/are pending in the application.
- 4a) Of the above claim(s) 11-21 and 31-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 22-30, 41-43, 48-57 is/are rejected.
- 7) ☒ Claim(s) 44-47 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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**Detailed Action**

1. This Office Action is for amendment dated 5/5/09. Referring to the Response to the Argument in the last pages of this Office Action.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-7, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi [ GB 2,380,908 A] in view of Adams et al. [ US 2006/0259,862 A1] and Dowling et al. [ US 2002/0038,157 A1].

**For claim 1**, Hayashi teaches a mobile communications device [mobile phone 101 in Fig.2] comprising

a wireless transceiver [ mobile phone 101 has the transceiver inherently, in order transmit, receive, communication signal, with radio base station 105, for downloading play data, page 5, lines 20-22 ], a processor [ controller 201 ] configured to analyze the audio file, synchronize a complementary multi-media effects with the audio file based on the synchronizing information [ the controller 201 sets the play speed, tempo, based on tempo data 501, synchronization information, in data file to synchronize the turning on/off of LED/vibrator according to the music playing speed step 315, to turn on/off LED/vibrator at correct timing according to the music playing information, Fig. 3/ Fig. 6, page 7, line 20 to page 8, line 5 & page 8, lines 14-29; the audio file with 401-403 in Fig. 4 & LED sync 502/vibrate sync 503 in Fig. 5; the memory 202 has stored audio file with note number 404, 403, Fig. 4/ Fig. 3, page 9, lines 12-21 ].

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Hayashi fails to teach the calculating synchronizing information based on the analysis of the audio file.

Adams et al. [ Adams ] teaches the calculating synchronizing information based on the analysis of the audio file [ the calculating synchronizing information based on the analysis of the audio file [ on display screen, use selects the adjusted tempo, synchronization, with the marker 170 at cursor on screen, the computer calculates the timing, tempo, based on the audio file 124, 126, 128, to synchronize the audio to the video 122, paragraph 0032, 0031, Fig. 1 & it corresponding description in the specification ], such that user can adjust the tempo synchronization for different audio to match the accompanying video [ paragraph 0006]. Therefore, one of ordinary skill in the art at the time the invention was made would have been obvious to modify Hayashi with Adams's teachings above, such that the video picture could be synchronized to different audio, by adjusting the tempo of the audio.

Hayashi in view of Adams fail to teach the generating a pattern, synchronously with the playback of the audio file.

Dowling et al. [ Dowling ] teaches the generating a pattern in which to render a complementary multi-media effect synchronously with the playback of the audio file based on the synchronizing information

[ the computer readable medium 2007 executes light program to control LED lights according to the processing of audio input data 2005 to generates lights, the mapper 2019, the light output port 2020 of the computer system 2009 in Fig. 8; the processor 10, light sequence 20/light control 30 in Fig. 1, paragraph 0017; changing light show based on the inputted audio data in parag 0110; using parag for paragraph ], in order to emphasize the audio/music playing with the synchronized light effect. Therefore, one of ordinary skill in the art at the time the invention was

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made would have been obvious to modify Hayashi, Adams with Dowling's teaching above, such that the light effect could be synchronized to different audio/music played.

**For claim 2**, Hayashi teaches the mobile phone communications device [ 101, Fig. 2], wherein said information is timing information [ the time information in tempo 501, the setting of tempo, playing speed, based on play data in page 8, lines 24-29].

**For claims 4**, Hayashi teaches the mobile phone communications device [ 101, Fig. 2], wherein said processor [201] stores the synchronizing information in said memory [ storing down loaded play data in RAM, which has synchronizing indicating data 501-503, 401-404].

**For claims 5**, Hayashi teaches the mobile phone communications device [ 101, Fig. 2], wherein said processor generates a control signal during playback of the audio file to control the complementary multi-media effect according to the synchronizing information [ the LED emits light based on the electrical signal generated from controller 201, page 6, lines 22-28; sync data 502, 503].

**For claims 6**, Hayashi teaches the mobile phone communications device [ 101, Fig. 2], wherein the complementary multi-media effect comprises tactile feedback [vibrator 211], and said control signal controls a tactile feedback generator in synchronization with the synchronizing information [ the controller 210 generates electrical signal to synchronize vibrator 211 to played music, page 6, lines 22-28, sync data 503].

**For claims 7**, Hayashi teaches the mobile phone communications device [ 101, Fig. 2], wherein the complementary multi-media effect comprises one or more lights [210] and

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said control signal controls the one or more lights in synchronization with the synchronizing information [ the 201 generates electrical signal to emits light from Led 210 to synchronize with played music data specified in 403-404, page 6, lines 22-28].

Regarding **claim 10**, Hayashi, Adam fail to teach the controlling an external device.

Dowling teaches the wherein said the processor [ computer system 2009, Fig. 8 ] generate control signal [ signal from output port 2020] during playback of the audio file to control an external device connected via the system interface [ the lighting network connected to output port 2020] according to the synchronizing information [ audio data 2005 & parag 0017, 0110], in order to control the external lighting network for the synchronized light effect. Therefore, one of ordinary skill in the art at the time the invention was made would have been obvious to modify Hayashi, Adams with Dowling's teaching above, such that the external lighting network could provide the synchronized light effect.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Adams, Dowling, as applied to claim 1 above, and further in view of Vandermeijden et al. [US 2004/0067,751 A1].

**For claim 3**, Hayashi teaches the mobile phone communications device [ 101, Fig. 2], but fails to teach the wherein said information is instrument type information.

Vandermeijden et al. [Vandermeijden] teaches the user can assign the sound of particular musical instrument to a group of callers, for the ring tone [ paragraph 0025], of the mobile telephone for identifying different caller [abstract]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

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was made to provide Hayashi, Adams with Vandermeijden's different distinct instrument sound for notifying the incoming call, in order to identify different caller.

4. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Adams, Dowling, as applied to claims 5 above, and further in view of Fredlund et al. [ US 6,639,649 B2].

**For claim 8**, Hayashi teaches the mobile phone communications device [ 101 in Fig. 2], but fails to teach the wherein the complementary multi-media effect comprises a camera, and said control signal activates the camera to take a picture in synchronization with the synchronizing information.

Fredlund et al. [Fredlund] teaches these features [ the camera 10; the generate a signal by analyzing stored audio to capture plurality of images in col. 3, lines 23-47; the synchronizing pleasing effect is created in accordance with played music beat in col. 1, lines 1-6], to creating a better effect by playing music while taking a picture. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Adams with the teachings from Fredlund, in order to provide better effect by playing music while taking a picture.

**For claim 9**, Hayashi teaches the mobile phone communications device 101 in Fig. 2, but fails to teach the wherein the complementary multi-media effect comprises a video sequence, and said control signal controls a display to playback said video sequence in synchronization with the synchronizing information.

Fredlund teaches these features [ the music analyzer analyzing stored audio for determining when to display a sequence of stored images according to the stored audio and a audio reproducer for playing the audio recording, col. 1, line 57 to col. 2,

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lines 7; display 50], using the same reason in claim 8 for combining Fredlund to Hayashi & Adams.

5. Claims 11-13, 15-18, 21, 31-32, 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata [ US 2001/0023,197,197 A1], Adams-'862 A1 and Dowling-'157 A1.

**For claim 11**, Hayashi teaches a mobile communications device [101 in Fig. 2] comprising

memory to store an audio file [the memory 202, page 6, lines 1-7, has synchronizing indicating data, 501-503 & music identifier 403 & note number 404 in Fig. 4, page 9, 12-21];

a processor to synchronize a complementary multi-media effect with the audio file based on the synchronizing information [ the controller 201 makes a positive determination to synchronize the playing of music data with the LED, vibrator, turn-on/off, page 7, lines 20-25; S305-307; based on the synchronizing indicating data 401-404, 501-505; the synchronizing target type information 401, music source, music identifier & note number in 402-404, the sync data 501-503].

Hayashi fails to teach an interface to receive user selected synchronizing information to be associated with an audio file from a user of the mobile communication device; associate the user selected synchronization information with the audio file and synchronize a complementary multi-media effect with the audio file based on the user selected synchronizing information.

Shibata teaches an interface to receive user selected ring ton melody associated with an audio file from a user of the mobile communication device

[ the user depresses input key 1-3 to select synchronizing melody with different synchronization information, to synchronize the vibrator 90, paragraph 0029-0030],



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associate the user selected ring tone melody with the audio file and synchronize a complementary multi-media effect with the audio file based on the user selected synchronizing information [ play the selected melody with synchronized vibration 90 ], in order to provide better function to user with user selectable melody to synchronize the incoming call alert. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi with Shibata's user selectable melody, in order to provide better function to user with user selectable melody to synchronize the incoming call alert.

Hayashi, Shibata fail to teach the associate the user selected synchronization information with the audio file.

Adams teaches the associate the user selected synchronization information with the audio file [ user selects the temp, synchronization, adjustment with the audio filer 124, 126, 128, via maker 170 at cursor on screen, paragraph 0031, 0032, Fig. 1], such that user can adjust the tempo synchronization for different audio to match the accompanying video [ paragraph 0006]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hayashi, Shibata with Adams's teachings of adjusting the tempo of the audio to match the accompanying video, such that the video could be synchronized to different audio, by adjusting the tempo of the audio.

Hayashi, Shibata, Adams fail to teach the generating a pattern, synchronously with the playback of the audio file.

Dowling teaches the generating a pattern in which to render a complementary multi-media effect synchronously with the playback of the audio file based on the synchronizing information

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[ the computer readable medium 2007 executes light program to control LED lights according to the processing of audio input data 2005 to generates lights, the mapper 2019, the light output port 2020 of the computer system 2009 in Fig. 8; the processor 10, light sequence 20/light control 30 in Fig. 1, paragraph 0017; changing light show based on the inputted audio data in paragraph 0110; using paragraph 0110, in order to emphasize the audio/music playing with the synchronized light effect. Therefore, one of ordinary skill in the art at the time the invention was made would have been obvious to modify Hayashi, Shibata, Adams with Dowling's teaching above, such that the light effect could be synchronized to different audio/music played.

**For claim 12,** Hayashi teaches the mobile phone communications device in Fig. 2, but fails to teach the features for this claim. Shibata teaches the wherein said interface comprises a menu displaying the synchronizing information [ the melody selection menu displayed on display 30 for user to make a selection of melody to be synchronized to incoming call, paragraph 0028], using the same rationale in claim 11 to combine Shibata to Hayashi.

**For claim 13,** Hayashi teaches the mobile phone communications device 101 [ Fig. 2], wherein said information is timing information [ the time information in tempo 501, the setting of tempo, playing speed, in page 8, lines 24-29].

**For claim 15,** Hayashi teaches the mobile phone communications device 101 in Fig. 2, but fails to teach the wherein said processor stores the synchronizing information in said memory.

Shibata teaches these features [ the control unit 140 conducts the incoming call setup process in paragraph 0027, & to store the user selected melody into memory

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80 for the incoming call, paragraph 0028], using the same rationale in claim 11 to combine Shibata to Hayashi.

**For claim 16,** Hayashi teaches the mobile phone communications device [ 101 in Fig. 2], wherein said processor generates a control signal during playback of the audio file to control the complementary multi-media effect according to the synchronizing information

[ the LED emits light based on the electrical signal generated from controller 201, page 6, lines 22-28].

**For claim 17,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein the complementary multi-media effect comprises tactile feedback [vibrator 211], and said control signal controls a tactile feedback generator in synchronization with the synchronizing information [ the controller 210 generates electrical signal to synchronize vibrator 211 to played music, page 6, lines 22-28].

**For claim 18,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein the complementary multi-media effect comprises one or more lights [210] and

said control signal controls the one or more lights in synchronization with the synchronizing information [ the 201 generates electrical signal to emits light from Led 210 to synchronize with played music data specified in 403-404, page 6, lines 22-28].

Regarding **claim 21,** Hayashi, Shibata, Adam fail to teach the controlling an external device.

Dowling teaches the wherein said the processor [ computer system 2009, Fig. 8 ] generate control signal [ signal from output port 2020] during playback of the audio file to control an external device connected via the system interface [ the lighting network connected to output port 2020] according to the synchronizing information

[ audio data 2005 & parag 0017, 0110], in order to control the external lighting network for the synchronized light effect. Therefore, one of ordinary skill in the art at the time the invention was made would have been obvious to modify Hayashi, Adams with Dowling's teaching above, such that the external lighting network could provide the synchronized light effect.

**For claim 31**, Hayashi teaches a method [steps in Fig. 3] of synchronizing one or more complementary multi-media effects with an audio file in a mobile communications device [ steps 306, 312, the synchronizing of the music data with LED 210, or vibrator 211, of a mobile phone, abstract, Fig. 2],

the method comprising synchronizing a complementary multi-media effect in the mobile communications device with the audio file based on the synchronizing information [ the controller 201 makes a positive determination to synchronize music data playing with the LED, vibrator, turn-on/off, page 7, lines 20-25; S305-307; based on the synchronizing indicating data 401-404, 501-505; the synchronizing target type information 401, music source, music identifier & note number in 402-404, the sync data 501-503].

Hayashi fails to teach the receiving user selected of the synchronizing information to be associated with an audio file stored in memory of the mobile communications device; associating of the user-selected synchronization information with the audio file based on the user selected synchronization information.

Shibata teaches the receiving user selected of the ring tone melody to be associated with an audio file stored in memory of the mobile communications device

[ the user depresses input key 1-3 to select synchronizing melody with different synchronization, to synchronize the vibrator 90, paragraph 0029-0030],

associating of the user-selected ring tone melody with the audio file based on the user selected ring tone melody [ play the selected melody with synchronized vibration 90], in order to provide better function to user with user selectable melody to synchronize the incoming call alert. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi with Shibata's user selectable melody, in order to provide better function to user with user selectable melody to synchronize the incoming call alert.

Hayashi, Shibata fail to teach the associate the receiving user selected synchronization information; associating user selected synchronization information with the audio file.

Adams teaches the associate the receiving user selected synchronization information

[ the downbeat 173 of the audio track [ paragraph 0032, Fig. 1]; the associate the user selected synchronization information with the audio file [ user selects the temp, synchronization, adjustment with the audio filer 124, 126, 128, via maker 170 at cursor on screen, paragraph 0031, 0032, Fig. 1], such that user can adjust the tempo synchronization for different audio to match the accompanying video [ paragraph 0006]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hayashi, Shibata with Adams's teachings of adjusting the tempo of the audio to match the accompanying video, such that the video could be synchronized to different audio, by adjusting the tempo of the audio.

Hayashi, Shibata, Adams fail to teach the generating a pattern, synchronously with the playback of the audio file.

Dowling teaches the generating a pattern in which to render a complementary multi-media effect synchronously with the playback of the audio file based on the synchronizing information

[ the computer readable medium 2007 executes light program to control LED lights according to the processing of audio input data 2005 to generates lights, the mapper 2019, the light output port 2020 of the computer system 2009 in Fig. 8; the processor 10, light sequence 20/light control 30 in Fig. 1, paragraph 0017; changing light show based on the inputted audio data in parag 0110; using parag for paragraph ], in order to emphasize the audio/music playing with the synchronized light effect. Therefore, one of ordinary skill in the art at the time the invention was made would have been obvious to modify Hayashi, Shibata, Adams with Dowling's teaching above, such that the light effect could be synchronized to different audio/music played.

**For claim 32,** Hayashi fails to teach the features in this claim.

Shibata teaches wherein selecting information regarding an audio file comprises displaying a menu option to a user of the mobile communications device [cellular phone in Fig. 1, the displaying melodies in display 30 for user to select, 0028], said menu option comprising synchronizing information to be associated with the audio file [ the vibrator on/off synchronizing information is associated with the melody in memory 80, paragraph 0029-0030].

**For claim 35,** Hayashi teaches the further comprises storing the synchronizing information in memory [ the down loading of play data & storing in to RAM of memory 202, page 6, lines 1-7].

**For claim 36,** Hayashi teaches wherein synchronizing a complementary multi-media effect comprises generating a control signal during playback of the audio file

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to control the complementary multi-media effect according to the selected synchronizing information

[ the LED emits light based on the electrical signal generated from controller 201, page 6, lines 22-28; sync data 502, 503].

**For claim 37**, Hayashi teaches the further comprising controlling a tactile feedback generator in synchronization with the selected synchronizing information [ the controller 210 generates electrical signal to synchronize vibrator 211 to played music, page 6, lines 22-28, sync data 503]..

**For claim 38**, Hayashi teaches the further comprising controlling one or more lights in synchronization with the selected synchronizing information [ the sync data 502 for synchronizing music data 401-404 with LED on/off].

6. Claims 14, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata, Adams, Dowling, as applied to claims 11, 32 above, and further in view of Vandermeijden-'751 A1.

**For claim 14**, Hayashi teaches the mobile phone communications device in Fig.

2. Hayashis & Shibata, Adams fail to teach further features in this claim 1.

Vandermeijden teaches the wherein said information is instrument type information

[ the user can assign the sound of particular musical instrument to a group of callers, for the ring tone, paragraph 0025], of the mobile telephone for identifying different caller [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Hayashi, Shibata, Adams with Vandermeijden's different distinct instrument sound for notifying the incoming call, in order to identify different caller.

**For claim 34**, Hayashi fails to teach further features in this claim. Shibata teaches the menu selection of melody. Hayashi, Shibata, Adams fail to teach further features for this claim.

Vandermeijden teaches the list of instrument types [ the different musical instrument for different callers for synchronizing to ring tone, paragraph 0025], in order to upgrade the function with the feature to allow user to select different instrument sound for playing back for the incoming callers. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Shibata's menu selection, Adams with Vandermeijden's different instrument, in order to provide choice to allow user to select different instrument sound to differentiate incoming call.

7. Claims 22-23, 25-28, 41, 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi [GB 2,380,908 A] in view of Adams-'862 A1 and Dowling -'157A1.

**For claim 22**, Hayashi teaches a method [steps in Fig. 3] of synchronize multi-media effects with an audio file in a mobile communications device [ steps 306, 312, to synchronize of the music data with the light/vibration effect from LED 210/vibrator 211 of a mobile phone, abstract, Fig. 2],

the method comprising analyzing an audio file stored in memory of the mobile communications device [ the controller 201 analyzes synchronizing data 501-503 & music indicating data 401-404, to determine the music data for synchronizing with LED or vibrator page 7, lines 5-28, Fig. 4-6; the play data in Fig. 4-5, stored in RAM of memory 202, as the audio file in memory ]



synchronize a complementary multi-media effects in the mobile communications device with audio file based on the synchronizing information [ the controller 201 sets the play speed, tempo, based on tempo data 501, synchronization information, in data file to synchronize the turning on/off of LED/vibrator according to the music playing speed step 315, to turn on/off LED/vibrator at correct timing according to the music playing information, Fig. 3/Fig. 6, page 7, line 20 to page 8, line 5 & page 8, lines 14-29; the audio file with 401-403 in Fig. 4 & LED sync 502/vibrate sync 503 in Fig. 5; the memory 202 has stored audio file with note number 404, 403, Fig. 4/Fig. 3, page 9, lines 12-21 ].

Hayashi fails to teach the calculating synchronizing information based on the analysis of the audio file.

Adams teaches the calculating synchronizing information based on the analysis of the audio file [teaches the calculating synchronizing information based on the analysis of the audio file [ on display screen, use selects the adjusted tempo, synchronization, with the marker 170 at cursor on screen, the computer calculates the timing, tempo, based on the audio file 124, 126, 128, to synchronize the audio to the video 122, paragraph 0032, 0031, Fig. 1 & it corresponding description in the specification ], such that user can adjust the tempo synchronization for different audio to match the accompanying video [ paragraph 0006]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hayashi with Adams's teachings of adjusting the tempo of the audio to match the accompanying video, such that the video could be synchronized to different audio, by adjusting the tempo of the audio.

Hayashi, Adams fail to teach the generating a pattern, synchronously with the playback of the audio file.

Dowling teaches the generating a pattern in which to render a complementary multi-media effect synchronously with the playback of the audio file based on the synchronizing information

[ the computer readable medium 2007 executes light program to control LED lights according to the processing of audio input data 2005 to generates lights, the mapper 2019, the light output port 2020 of the computer system 2009 in Fig. 8; the processor 10, light sequence 20/light control 30 in Fig. 1, paragraph 0017; changing light show based on the inputted audio data in parag 0110; using parag for paragraph ], in order to emphasize the audio/music playing with the synchronized light effect. Therefore, one of ordinary skill in the art at the time the invention was made would have been obvious to modify Hayashi, Adams with Dowling's teaching above, such that the light effect could be synchronized to different audio/music played.

**For claim 23**, Hayashi teaches the mobile phone communications device [ 101 in Fig. 2], wherein said information is timing information [the time information in tempo 501, the setting of tempo, playing speed, in page 8, lines 24-29].

**For claim 25**, Hayashi teaches the mobile phone communications device [ 101 in Fig. 2], wherein said processor [201] stores the synchronizing information in said memory [ storing down loaded play data in RAM, which has synchronizing indicating data 501-503, 401-404].

**For claim 26**, Hayashi teaches the mobile phone communications device [ 101 in Fig. 2], wherein said processor generates a control signal during playback of the audio file to control the complementary multi-media effect according to the synchronizing information

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[ the LED emits light based on the electrical signal generated from controller 201, page 6, lines 22-28].

**For claim 27**, Hayashi teaches the mobile phone communications device [ 101 in Fig. 2], wherein the complementary multi-media effect comprises tactile feedback [vibrator 211], and said control signal controls a tactile feedback generator in synchronization with the synchronizing information [ the controller 210 generates electrical signal to synchronize vibrator 211 to played music, page 6, lines 22-28].

**For claim 28**, Hayashi teaches the mobile phone communications device [ 101 in Fig. 2], wherein the complementary multi-media effect comprises one or more lights [210] and

said control signal controls the one or more lights in synchronization with the synchronizing information [ the 201 generates electrical signal to emits light from Led 210 to synchronize with played music data specified in 403-404, page 6, lines 22-28].

**For claim 41**, Hayashi teaches a method of synchronizing one or more complementary multi-media effects [ the synchronizing of the music data with vibrator 211, LED 210 in abstract] with an audio file [ the memory 202, page 6, lines 1-7, has music identifier 403 & note number 404 in Fig. 4, page 9, 12-21] in a mobile communications device [mobile phone, page 1, lines 5-10], the method comprising selecting a sample from an audio file stored in memory in a mobile communications device [ the controller selects the music data contained in play data page 9, lines 3-11 & the indicating data 501-503 in Fig. 5; the indicating data in Fig. 4 contains the music identifier 403 & note number 404 in page 9, lines 5-21; stored in RAM of memory 202];

analyzing said sample [ the 201 determines whether or not the music is contained in the play data S303, page 7, lines 5-15; the mobile phone in Fig. 2; the

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controller 201 sets the play speed, tempo, based on tempo data 501, synchronization information, in data file to synchronize the turning on/off of LED/vibrator according to the music playing speed step 315, to turn on/off LED/vibrator at correct timing according to the music playing information, Fig. 3/FIG. 6, page 7, line 20 to page 8, line 5 & page 8, lines 14-29; the audio file with 401-403 in Fig. 4 & LED sync 502/vibrate sync 503 in Fig. 5; the memory 202 has stored audio file with note number 404, 403, Fig. 4/FIG. 3, page 9, lines 12-21 ].

Hayashi fails to teach the calculating synchronizing information based on the analysis of the audio file.

Adams teaches the calculating synchronizing information based on the analysis of the audio file [ the calculating synchronizing information based on the analysis of the audio file [ on display screen, use selects the adjusted tempo, synchronization, with the marker 170 at cursor on screen, the computer calculates the timing, tempo, based on the audio file 124, 126, 128, to synchronize the audio to the video 122, paragraph 0032, 0031, Fig. 1 & it corresponding description in the specification ], such that user can adjust the tempo synchronization for different audio to match the accompanying video [ paragraph 0006]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hayashi with Adams's teachings of adjusting the tempo of the audio to match the accompanying video, such that the video could be synchronized to different audio, by adjusting the tempo of the audio.

Hayashi, Adams fail to teach the generating a pattern, synchronously with the playback of the audio file.

Dowling teaches the generating a pattern in which to render a one or more complementary multi-media effect, synchronously with the playback of the audio file based on the synchronizing information

[ the computer readable medium 2007 executes light program to control LED lights according to the processing of audio input data 2005 to generates lights, the mapper 2019, the light output port 2020 of the computer system 2009 in Fig. 8; the processor 10, light sequence 20/light control 30 in Fig. 1, paragraph 0017; changing light show based on the inputted audio data in para 0110; using para for paragraph ], in order to emphasize the audio/music playing with the synchronized light effect. Therefore, one of ordinary skill in the art at the time the invention was made would have been obvious to modify Hayashi, Adams with Dowling's teaching above, such that the light effect could be synchronized to different audio/music played.

**For claim 54**, Hayashi fails to teach the features in this claim. Shibata teaches the method further comprising overwriting selected information in the audio file with the synchronizing information [ the overwriting selected indicating "1 ON", "2 OFF", in to memory 80, for synchronizing melody with vibration, or different screens 30, paragraph 0029-0033], using the same rationale in claim 31 for combining Shibata to Hayashi.

**For claim 55**, Hayashi teaches the further comprising the storing the synchronizing information in memory of the mobile communications device [the mobile phone downloading play data for storing in RAM, page 6, lines 1-7].

**For claim 56**, Hayashi teaches the wherein synchronizing the one or more complementary multi-media effects with the audio file [ the synchronizing of LED, vibrator to music data in indicating data 403-404 of the play data in Fig. 5] comprises

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generating a control signal to the one or more multi-media effects based on the synchronizing information during playback of the audio file [the LED emits light based on the electrical signal generated from controller 201, page 6, lines 22-28].

**For claim 57**, Hayashi teaches a circuit [ Fig. 2] comprising a microprocessor [controller 210] programmed to analyzing an audio stream [ the program to be executed by controller 201, page 6 lines 1-3 & the step 306 in Fig. 3; the controller 201 sets the play speed, tempo, based on tempo data 501, synchronization information, in data file to synchronize the turning on/off of LED/vibrator according to the music playing speed step 315, to turn on/off LED/vibrator at correct timing according to the music playing information, Fig. 3/Fig. 6, page 7, line 20 to page 8, line 5 & page 8, lines 14-29; the audio file with 401-403 in Fig. 4 & LED sync 502/vibrate sync 503 in Fig. 5; the memory 202 has stored audio file with note number 404, 403, Fig. 4/Fig. 3, page 9, lines 12-21; based no the music playback from the downloaded music, page 4, lines 4-11 & page 5, lines20-23].

Hayashi fails to teach the calculating synchronizing information based on the analysis of the audio file.

Adams teaches the calculating synchronizing information based on the analysis of the audio file [teaches the calculating synchronizing information based on the analysis of the audio file [ on display screen, use selects the adjusted tempo, synchronization, with the marker 170 at cursor on screen, the computer calculates the timing, tempo, based on the audio file 124, 126, 128, to synchronize the audio to the video 122, paragraph 0032, 0031, Fig. 1 & it corresponding description in the specification ], such that user can adjust the tempo synchronization for different audio to match the accompanying video [ paragraph 0006]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to

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modify Hayashi with Adams's teachings of adjusting the tempo of the audio to match the accompanying video, such that the video could be synchronized to different audio, by adjusting the tempo of the audio.

Hayashi, Adams fail to teach the generating a pattern, synchronously with the playback of the audio file.

Dowling teaches the generating a pattern in which to render a complementary multi-media effect synchronously with the playback of the audio file based on the synchronizing information

[ the computer readable medium 2007 executes light program to control LED lights according to the processing of audio input data 2005 to generates lights, the mapper 2019, the light output port 2020 of the computer system 2009 in Fig. 8; the processor 10, light sequence 20/light control 30 in Fig. 1, paragraph 0017; changing light show based on the inputted audio data in parag 0110; using parag for paragraph ], in order to emphasize the audio/music playing with the synchronized light effect. Therefore, one of ordinary skill in the art at the time the invention was made would have been obvious to modify Hayashi, Adams with Dowling's teaching above, such that the light effect could be synchronized to different audio/music played.

8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Adams, Dowling, as applied to claim 22 above, and further in view of Vandermeijden-'751 A1.

**For claim 24,** Hayashi teaches the mobile phone communications device in Fig.

2. Hayashi, Adams fail to teach the wherein said information is instrument type information [ the user can assign the sound of particular musical instrument to a

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group of callers, for the ring tone, paragraph 0025], of the mobile telephone for identifying different caller [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Hayashi, Adams with Vandermeijden's different distinct instrument sound for notifying the incoming call, in order to identify different caller

9. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Adams, Dowling, as applied to claim 26 above, and further in view of Fredlund-'649 B2.

**For claim 29**, Hayashi teaches the mobile phone communications device in Fig.

2. Hayashi, Adams fail to teach the wherein the complementary multi-media effect comprises a camera, and said control signal activates the camera to take a picture in synchronization with the synchronizing information.

Fredlund teaches these features [ the camera 10; the generate a signal by analyzing stored audio to capture plurality of images in col. 3, lines 23-47; the synchronizing pleasing effect is created in accordance with played music beat in col. 1, lines 1-6], to creating a better effect by playing music while taking a picture. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Adams with the teachings from Fredlund, in order to provide better effect by playing music while taking a picture.

**For claim 30**, Hayahsi teaches the mobile phone communications device in Fig.

2. Hayashi, Adams fail to teach the wherein the complementary multi-media effect comprises a video sequence, and said control signal controls a display to playback said video sequence in synchronization with the synchronizing information.



Fredlund teaches these features [ the music analyzer analyzing stored audio for determining when to display a sequence of stored images according to the stored audio and a audio reproducer for playing the audio recording, col. 1, line 57 to col. 2, lines 7; display 50], using the same rationale in claim 29 for combining Fredlund to Hayashi, Adams.

10. Claims 19-20, 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata, Adams, Dowling, as applied to claims 16, 36 above, and further in view of Fredlund-'649.

**For claims 19, 39,** Hayashi teaches the mobile phone communications device in Fig. 2.

Hayashi, Shibata, Adams fail to teach the wherein the complementary multi-media effect comprises a camera, and said control signal activates the camera to take a picture in synchronization with the synchronizing information.

Fredlund teaches these features [ the camera 10; the generate a signal by analyzing stored audio to capture plurality of images in col. 3, lines 23-47; the synchronizing pleasing effect is created in accordance with played music beat in col. 1, lines 1-6], using the same rationale for Fredlund in claim 29 above to combine with Hayashi, Shibata, Adams.

**For claims 20, 40,** Hayashi teaches the mobile phone communications device in Fig. 2.

Hayashi & Shibata, Adams fail to teach wherein the complementary multi-media effect comprises a video sequence, and said control signal controls a display to playback said video sequence in synchronization with the synchronizing information.

Fredlund teaches these features [ the music analyzer analyzing stored audio for determining when to display a sequence of stored images according to the stored audio and a audio reproducer for playing the audio recording, col. 1, line 57 to col. 2, lines 7; display 50], using the same rationale in claim 29 for combining Fredlund to Hayashi, Shibata, Adams.

11. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata, Adams, Dowling, as applied to claim 32 above, and further in view of Aoki et al. (US 5,763,802).

**For claim 33**, Hayashi teaches the timing signature [ the time information in tempo 501 for setting of tempo, playing speed, based on the different speed of play data in page 8, lines 24-29, for the timing signatures], Shibata teach the menu option for the selection of melody for synchronizing to vibrator, lamp. Hayashi, Shibata, Adam fail to teach the menu option comprising a list timing signatures.

Aoki et al. [Aoki] teaches the sound timing pattern as the list of timing signature [T1-Tm+1 in Fig. 2, col. 3, line 56 to col. 4, line 21], in order to identify a sound section [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Shibata's menu selection, Adams with Aoki's listing of sound timing patterns, in order to provide better features to allow user to select sound timing pattern.

12. Claims 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata, Adams, Dowling, as applied to claim 41 above, and further in view of Aoki-'802.

**For claim 42,** Hayashi, Shibata, Adams fail to teach the wherein analyzing said sample to determine synchronizing information [ the analyzing music data in indicating data 401-404, for determine the synchronizing music data], but fail to teaches comprises sectioning said sample into a plurality of measures, each said measure comprising an equivalent number of notes.

Aoki teaches these features [ the search a sound pattern via chord analysis of each divided sound performance section, sample, which has a predetermined number of beats, col. 1, line 58 to col. 2, line 6, Fig. 2-6; the predetermined number of beats is the equivalent number of notes in the measure], in order to identify a sound section [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Shibata, Adams with Aoki's predetermined number of beats in the performance section, in order to identify the music data.

**For claim 43,** Hayashi teaches the controller 201 to determined the synchronizing information as shown in claim 1. Hayashi, Shibata, Adams fail to teach the wherein analyzing said sample determine the notes that occur within a desired beat in each said measure.

Aoki teaches these features [ the analyzing divided section of the performance data & comparing the harmonic tone associated with the sound pattern S1-S4, for identifying a sound pattern in col. 7, lines 10-33; the predetermined number of beats in col. 1, line 58 to col. 2, line 6], using the same rationale for Aoki in clam 42 above to combine with Hayashi, Shibata, Adams.

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13. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata, Adams-862A1, Dowling, as applied to claim 41 above, and further in view of Adams [ US 2003/0017,808 A1].

**For claim 48**, Hayashi teaches the mobile phone communication device in Fig. 2 & the analyzing sample to calculate the synchronizing information 502-502, 401-404, in claim 22 above. Hayashi, Shibata, Adams-862A1 fail to teach the sampling the output of a MIDI synthesizer.

Adams teaches the sampling the output of a MIDI synthesizer [ the processor GPP 12 parses the MIDI output stream into synthesis packets for outputting audio signal via DAC 16, paragraph 0019, Fig. 1-2], for the low cost 3G wireless phone [0016]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hayashi, Shibata, Adams-862A1 with Adams' processing the output of MIDI data for audio synthesis, in order to reduce the cost.

14. Claims 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata, Adams-862A1, Adams-'808A1, Dowling, as applied to claim 48 above, and further in view of Fujiwara et al. [US 6, 800,799 B2].

**For claim 49**, Hayashi teaches the mobile phone communication device in Fig. 2 & the analyzing sample to determine the synchronizing information 502-502, 401-404. Hayashi, Shibata, Adams fail to teach the detecting a peak amplitude within said sample.

Fujiwara teaches these features [ the detecting of the peaks of audio signal AL1 during playback, for synchronization, in col. 12, lines 18-27; the applying threshold TH1 to audio peaks in col. 13, lines 16-20], in order to synchronize the timing of the audio playing back [abstract]. Therefore, It would have been obvious to one of

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ordinary skill in the art at the time the invention was made to upgrade Hayashi, Shibata, Adams-'862A1, Adams-808A1 with Fujiwara's teachings above, such that the timing could be synchronized to the audio playing back

**For claim 50**, Hayashi teaches the mobile phone communication device in Fig. 2 & the analyzing sample to determine the synchronizing information 502-502, 401-404.

Hayashi, Shibata, Adams-862A1, Adams-808A1 fail to teach the comparing said detected peak amplitude to a threshold value [ the detecting of the peaks of audio signal AL1 during playback, for synchronization, in col. 12, lines 18-27; the applying threshold TH1 to audio peaks in col. 13, lines 16-20]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Shibata, Adams-'862A1, Adams-808A1 with Fujiwara's teachings above, such that the timing could be synchronized to the audio playing back.

15. Claims 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata, Adams-862A1, Adams-'808A1, Dowling, Fujiwara, as applied to claim 50 above, and further in view of Goldberg et al. [ US 2007/0136,769 A1].

**For claim 51**, Hayashi in view of Shibata, Adams-862A1, Adams-'808A1, Dowling, Fujiwara fail to teach the threshold comparison.

Goldberg et al. [Goldberg ] teaches the wherein synchronizing the one or more complementary multi-media effects with the audio file comprises generating a control signal based on the comparison of said detected peak amplitude and said threshold value [ synchronizing audio playback in parag 0078, 0307; the comparing the maximum amplitude with threshold in parag 0291], in order to identify the music [

parag 0290]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Shibata, Adams-'862A1, Adams-808A1, Fujiwara with Goldberg's teachings above, such that the music could be identified for playing back

**For claims 52, 53,** Hayashi in view of Shibata, Adams-862A1, Adams-'808A1, Fujiwara fail to teach the varying the intensity.

Dowling teaches the wherein synchronizing the one or more multi-media effects with the audio file varying the intensity, varying the duration of activation, of the one or more complementary multi-media effects based on audio input [ modifying the intensity in parag 0047; defined duration in parag 0045; & parag 0017/0110], in order to indicate the synchronization with varying intensity. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Shibata, Adams-862A1, Adams-'808A1, Fujiwara with Dowling's teachings above, such that the synchronization effect could be indicated with varying intensity.

Hayashi, Shibata, Adams-862A1, Adams-'808A1, Fujiwara, Dowling fail to teach the threshold comparison.

Goldberg teaches the the comparison of said detected peak amplitude and said threshold value [synchronizing audio playback in parag 0078, 0307; the comparing the maximum amplitude with threshold in parag 0291], in order to identify the music [ parag 0290]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Shibata, Adams-'862A1, Adams-808A1, Fujiwara with Goldberg's teachings above, such that the music could be identified for playing back.

**For claim 53**, the cited prior arts in below fail to teach the wherein synchronizing the one or more complementary multi-media effects comprises varying the duration of activation of the one or more complementary multi-media effects based on the comparison of said detected peak amplitude and said threshold value.

#### **Claims Objection**

16. Claims 44-47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**For claim 44**, the cited prior arts in below fail to teach the analyzing said sample to determining synchronizing information further comprising calculating weight value by summing a velocity parameter of a corresponding note-on event for each said note that occurs within said desired beat in each said measure.

**For claim 45**, the cited prior arts in below fail to teach the wherein analyzing said sample to determine synchronizing information comprises calculating a first value and a second value based on a first candidate time signature and a second candidate time signature, respectively. **Claims 46-47** are objected to due to their dependency upon objected claim 45.

Other prior arts are also considered. They are: **Armanto et al. [US 6,094,587]**, **Chung [US 2003/0162,571 A1]**, **Nishitani [US 2003/0045,274 A1]**, **Matsuda et al. [US 2001/0014,616 A1]**, **Ito [US 6,597,928 B2]**, **Kawasaki et al. [US 2002/0142,810 A1]**, **Kim [US 6,278,884 B1]**, **Brown et al. [US 2005/0190,199A1]**.

#### **Response to Argument**

17. Applicant's arguments filed 5/5/09 have been fully considered but they are not persuasive.

Applicant argued the no teachings from Dowling et al. [ US 2002/0038,157 A1],  
for a processor that generates a synchronizing pattern based on synchronizing  
information that it calculated, due to operator's manually authoring the light program,  
its different from the processor of mobile device generating synchronizing pattern  
from audio file by processor [ pages 9-10 of Applicant's amendment ],

**Dowling-'157A1** does teach a processor that generates a synchronizing pattern  
based on synchronizing information that it calculated; the processor of mobile device  
generating synchronizing pattern from audio file by processor

[ the processor of the computer system 2009, in Fig. 8, Fig. 1-10 & its description  
in the specification, receiving audio input data, parag. 0110, from stored audio file in  
memory 202, & to analyze, store, the characteristic of the audio input, for generating  
control signals for controlling the LEDs with the stored audio characteristic, during  
execution of the lighting program, in parag. 0016, 0007, 0012; the lighting program  
can be authored by user in parag. 0062; for pre-setting the light sequence, grouping  
the lights in parag. 0030, 0049, while synchronizing to the audio/music playback;

the software applications can be loaded for execution in other system, in parag.  
0036, such that a mobile device, such as Hayashi-'908A1's mobile phone 101, can  
be loaded with above software to perform the synchronization of lights with audio ].

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time  
policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this  
final action is set to expire THREE MONTHS from the mailing date of this action. In  
the event a first reply is filed within TWO MONTHS of the mailing date of this final  
action and the advisory action is not mailed until after the end of the THREE-MONTH  
shortened statutory period, then the shortened statutory period will expire on the date



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the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Charles Chow/  
Examiner, Art Unit 2618  
July 20, 2009.

/Duc Nguyen/  
Supervisory Patent Examiner, Art Unit 2618